Instruction manual

MMC 2R
MMC 3R
MMC 4R
MMC 5R

Bang & Olufsen

The MMC Principle

At Bang & Olufsen we have been gradually improving the Moving Micro Cross, which has been the generating element in our cartridges for a number of years.

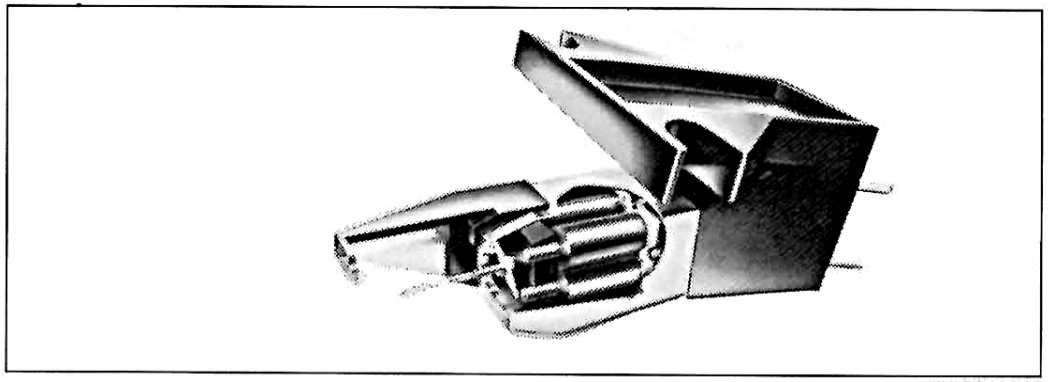
With the new MMC generation, the Moving Micro Cross is smaller and lighter than ever, which means less wear on your records. The precise engineering of the micro cross also provides superior channel separation.

By placing the micro cross in a powerful magnetic field we have succeeded in creating a cartridge of very small dimensions, while still retaining a high output voltage.

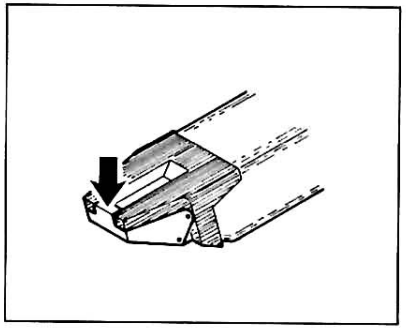
The minimum weight with bracket is only 3.3 grams, which gives the optimum compatibility with the best tone-arms on the market.

Information on the record is led via the stylus and cantilever to the micro cross. As a result the micro cross moves, causing variations in the powerful excitation current which comes from the fixed magnet and flows through both the micro cross and the four poles.

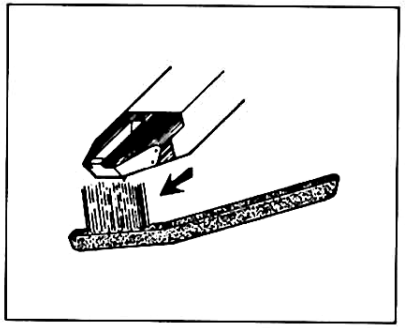
The varying excitation current is transformed into energy by the four push/pull coils wound on the poles and led to the amplifier via a cable.



Stylus guard
The MMC has a permanent stylus guard. Before playing a record, flip the guard up until it clicks. To protect the diamond and cantilever during removal flip the guard down with a fingernail until it clicks into its lowest position.



Cleaning the stylus
We recommend you use a special cleaning brush to clean the stylus. With the stylus guard up, insert the brush under the metal part of the cartridge and brush forwards very carefully.



Date of purchase

YEAR MONTH DAY

Dealer's stamp and signature

TECHNICAL SPECIFICATIONS	MMC 5R	MMC 4R	MMC 3R	MMC 2R
Stylus	Elliptical diamond 0.25 mm round titanium bonded	Elliptical diamond 0.20 mm round titanium bonded	Elliptical diamond 0.15x0.15 mm sqr. nude	Contact line diamond 0.12x0.12 mm sqr. nude
Radius of curvature	6 x 17µm	6 x 17µm	6 x 17µm	contact line
Cantilever	straight alu. tube	tapered alu. tube	tapered alu. tube	sapphire tube
Recommended tracking force	15 mN/1.5 gram	12 mN/1.2 gram	12 mN/1.2 gram	10 mN/1 gram
Effective tip mass	0.5 mg	0.4 mg	0.35 mg	0.3 mg
Compliance	20µm/mN	25µm/mN	25µm/mN	30µm/mN
Frequency response	20-20,000 Hz ±3 dB	20-20,000 Hz ±2.5 dB	20-20,000 Hz ±2 dB	20-20,000 Hz ±1.5 dB
Channel separation 1000 Hz	>20 dB	>22 dB	>25 dB	>25 dB
50-15,000 Hz	>15 dB	>17 dB	>20 dB	>20 dB
Channel difference	<2.5 dB	<2 dB	<1.5 dB	<1.5 dB
Output voltage	>0.6 mV/cm/sec.	>0.6 mV/cm/sec.	>0.6 mV/cm/sec.	>0.6 mV/cm/sec.
5 cm/sec. lat. RMS	>2.12 mV	>2.12 mV	>2.12 mV	>2.12 mV
Cartridge weight without bracket	1.6 gram	1.6 gram	1.6 gram	1.6 gram
Load: Resistance	≧47 kohms	≧47 kohms	≧47 kohms	≧47 kohms
Capacity	≦400 pF	≦400 pF	≦400 pF	≦400 pF

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